



American International University-Bangladesh (AIUB)

Faculty of Science and Technology (FST)

Department of Computer Science (CS)

SDPM Group Project, Spring 2023

Project Title: Vromon Travel Agency

Section: D

Submitted by

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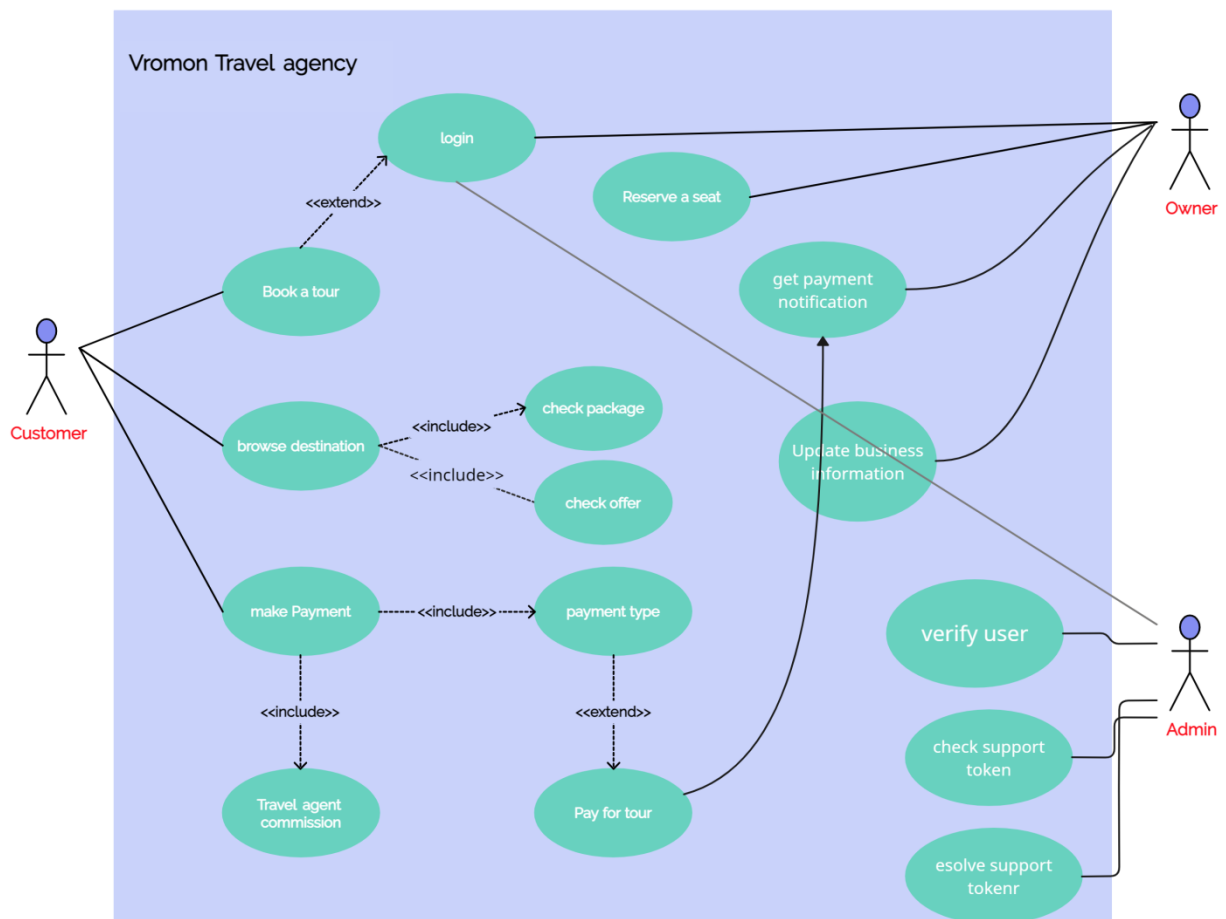
1.0 Introduction: If we look around the world we can see that the demand of internet access is growing very rapidly. Everyone now thinks how they will be benefited through online. Bangladesh tourism sector is also one of them. For this reason we will be working on it. We will try to create a web based platform for the business purposes of this project. There will also be transportation sector. We will be using location tracking, travelling route, destination route to determine all the necessary issues which will be necessary for our project. Tourists will get necessary data or information on the way to their journey. There will also be a payment method. In this project we will also use extreme programming for our software development. Extreme programming can help the meet the other software requirements.

2.0 Project Title: Vromon Travel Agency

3.0 Objectives: The web-based vromon travel agency will try to work on how the industry needs. It will be efficient for both traveller and business purposes. The travelers will easily know where to go and they will be able to clear their payment through payment method. They will also know how much they will need to pay for their desired destination. There will be different routes and the budget will be made according to the routes. The customer can select the route according to payment they feel flexible. The goal of this project is to ensure tourist comfort and business involved in the travel industry. Another objective of our project is to establish this system in every districts of Bangladesh. If we can establish this system we'll also be able to earn profit from our business.

4.0 Justification: The project will be very much useful for the clients because there will be a very much easy payment method. The working process will be very much fast. The service will be available for around-the-clock. For this reason, there will be no problem for the tourists to travel or cancel the appointing the travel at any time. There will be online communication between clients and agents. There will be different packages so that the travellers can find their desired destination easily. We will try our best to satisfy every customer demands. The system will offer a display platform where visitor can locate their destinations according to their preferences.

5.0 Use case diagram (System overview):



6. Stakeholders analysis: The project will have different stakeholders. They are discussed in below:

Primary stakeholders:

1. Customers
2. Employees
3. Shareholders.

Secondary stakeholders:

1. Suppliers
2. Government
3. Local communities

Internal to project team:

1. Project manager
2. Marketing and sales team
3. Operations team

External to project organization:

1. Competitors
2. Industry associations
3. Investors

7. **Feasibility study:** There are some feasibility studies of this project. They are:

- a. **Financial feasibility:** Our main focus will be generating revenue. Booking flights, tours and transportation are our main target. If it becomes successful, the e=agency will be benefited. We will also focus on managing the costs such as marketing expenses and

supplier fees. There will be also a facility of bank loan system so that agency's revenue is sufficient to pay off any debts.

- b. **Technical feasibility:** : For vromon travel agency we will need proper technology and services. The computer systems and the software systems will be up to date. It will also need to maintain strong relationship with suppliers such as airlines and hotels. It should produce high quality services so that people can be benefited. There should be skilled employees who will be able to handle the services properly. The employees should have to be well trained.

8. System Component: There are some system component of this project. They are:

Reservation system:

- a. It enables customers to book travel services online.
- b. Managing bookings, schedule changes.

Customer relationship:

- a. Manage customer data and interactions.
- b. Store customer information such as booking history.

Accounting system:

- a. Managing financial transaction systems.
- b. Track revenue, expenses.

Website and mobile application:

- a. Provide customers easy to use interface
- b. Receive alerts and notifications.

9. Process Model: The process model for vromon travel agency will depend on the specific development methodology used for the project. Agile methodology is flexible approach that

emphasizes customer collaboration, frequent delivery of working software and the ability to adapt to changing requirements. In summary, the process model for vromon travel agency will depend on the specific development methodology selected. The agile methodology could be a good fit for this project. Because it will be able to maintain and fulfill the requirements.

10. Effort Estimation: By using COCOMO method we get

$$\text{Effort} = \text{PM} = \text{Coefficient}_{\langle \text{effort factor} \rangle} * (\text{SLOC}/1000)^p$$

$$= 4 * (70,000/1000)^{1.12}$$

$$= 466 \text{ person months}$$

Here,

$$\text{SLOC(Source line of codes)} = 70,000$$

$$\text{Coefficient}_{\langle \text{Effort Factor} \rangle} = 4$$

$$\text{Project complexity (P)} = 1.12$$

$$\text{DM} = 2.50 * 466^{0.35}$$

$$= 21 \text{ months}$$

$$\text{Here PM} = 466 \text{ per months}$$

$$T = 0.35$$

Required number of people

$$\text{ST} = 466/21$$

$$= 22 \text{ peoples}$$

So the total estimation of the project is

Required person months for completion of the project is 466

For development the time is required 21 months

Total number of people is required 22 peoples.

11. Activity Diagram:

Label	Activity Name	Precedence	Duration (Weeks)
A	Project planning	None	3
B	Requirement gathering	A	4
C	Design analysis	A	2
D	System component design	B,C	5
E	Page creation	D	4
F	UI/UX design	D	8
G	Content creation	D	4
H	Backend system design	D	12
I	Testing and production	E,F,G,H	2

Now we will develop the network diagram

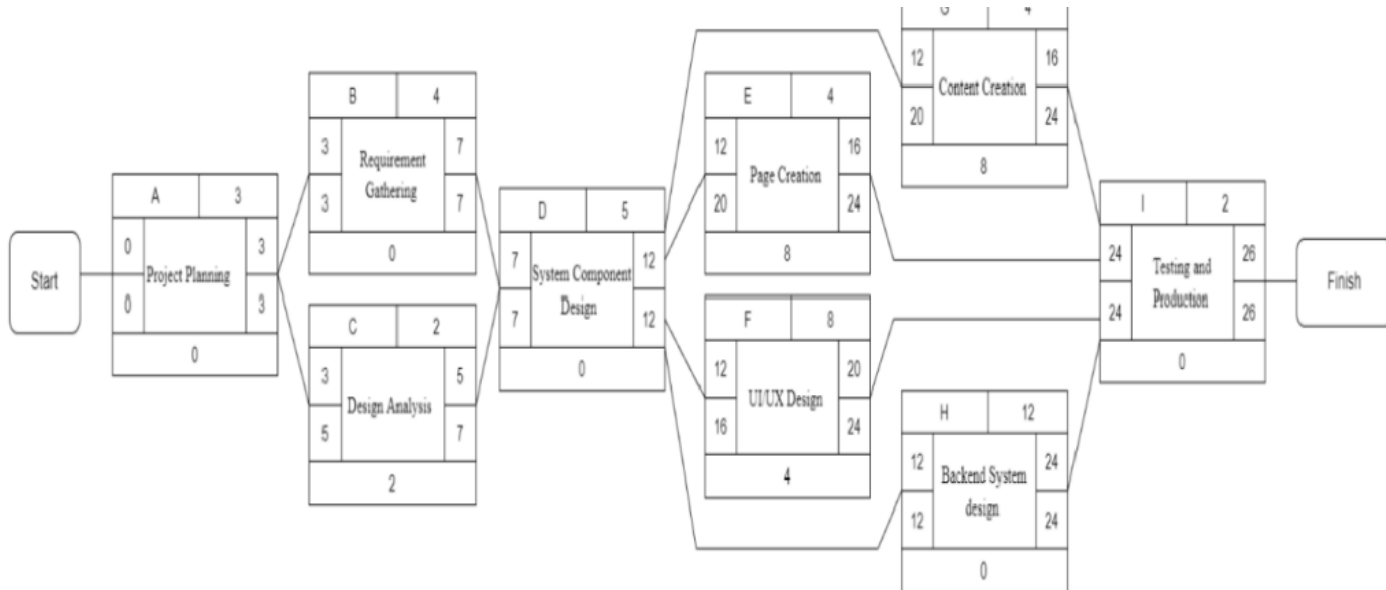


Figure: Network diagram

12. Risk Analysis:

Risks	Probability	Rating
Technical risks	20%	Medium
Resource risks	30%	High
Market risks	10%	Low
Security risks	15%	Low
Operational risks	20%	Medium

These can be the risks which can occur.

13. Budget for Project: According to our assumption,

Total working days = $21 \times 7 = 147$ days

= 147×8 hours

= 1176 hours

Salary per hour = 800 taka

Working days = 5

Salary per week = $800 \times 5 \times 8 = 32,000$ Taka

Working hours in 1 week = $5 \times 8 = 40$ hours

Salary per 4 weeks = $4 \times 32,000 = 1,28,000$ taka

Salary for 6 months = $1,28,000 \times 6 = 7,68,000$ taka

Salary for 4 members in 6 months = $4 \times 7,68,000 = 30,72,000$ Taka

Office rent for 6 months = $6 \times 20,000 = 1,20,000$ taka

Electricity and other bills in 6 months = 40,000 Taka

Maintenance cost = $4 \times 6 \times 2000 = 48,000$ Taka

Total estimated cost = $30,72,000 + 1,20,000 + 40,000 + 48,000 = 32,80,000$ Taka

25% profit of total estimated cost = $0.25 \times 32,80,000$ Taka = 8,20,000 Taka

Total estimated budget = $32,80,000 + 8,20,000$ Taka = 41,00,000 Taka

14. Conclusion: Overall we can say that vromon travel agency has the potential to provide a valuable travel booking platform for customers and generate revenue for the organization. However, successful implementation will require careful planning, execution and ongoing maintenance to ensure that the platform meets customer needs and remains competitive in the market. If our project follows all the requirements then it play a vital role for the benefits of people of the country.